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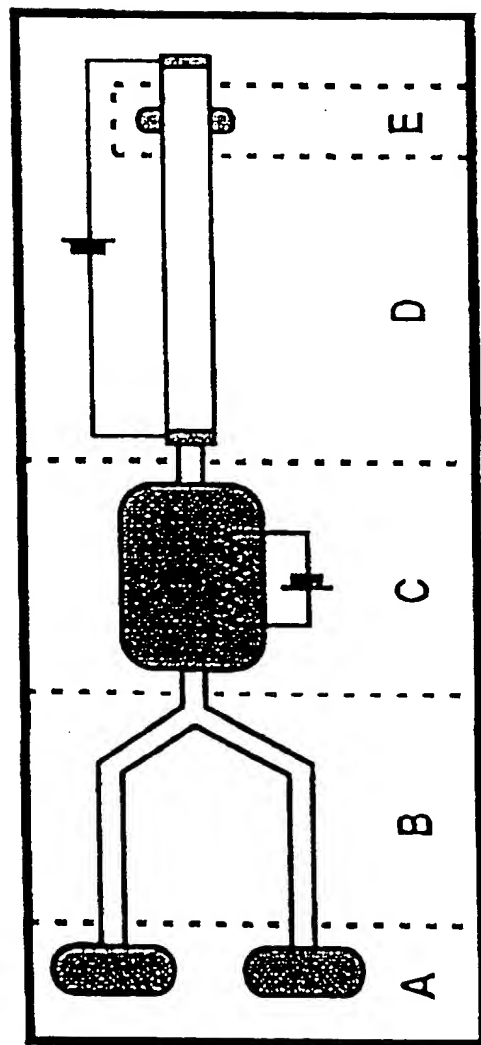


FIG. 1



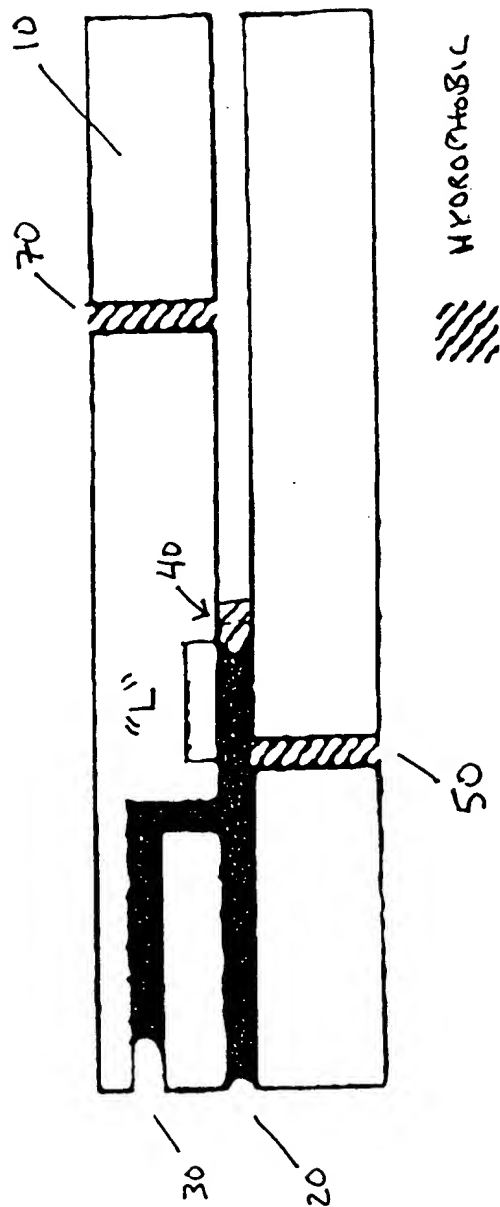


FIGURE 3A

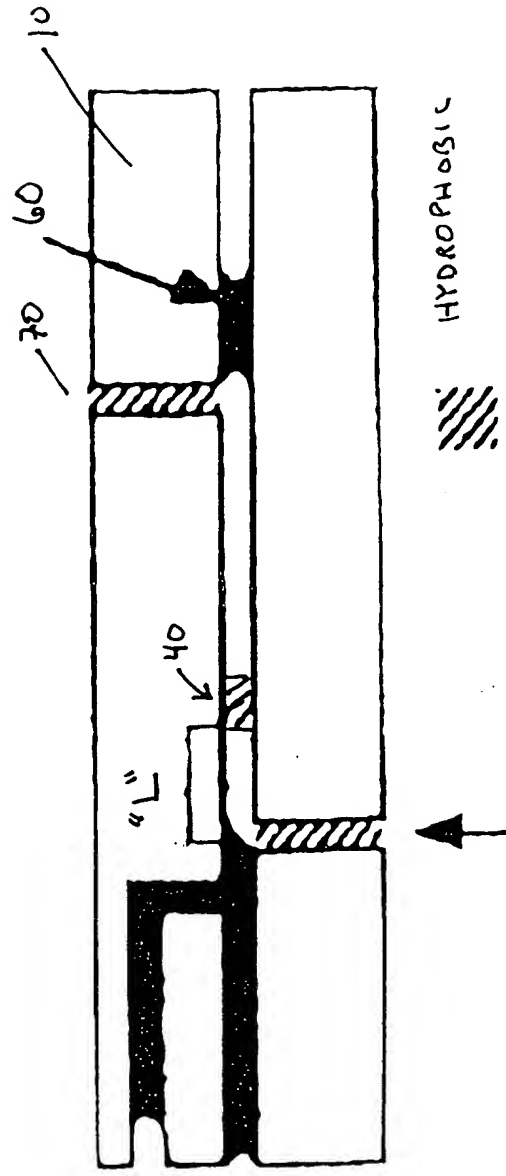


FIGURE 3B

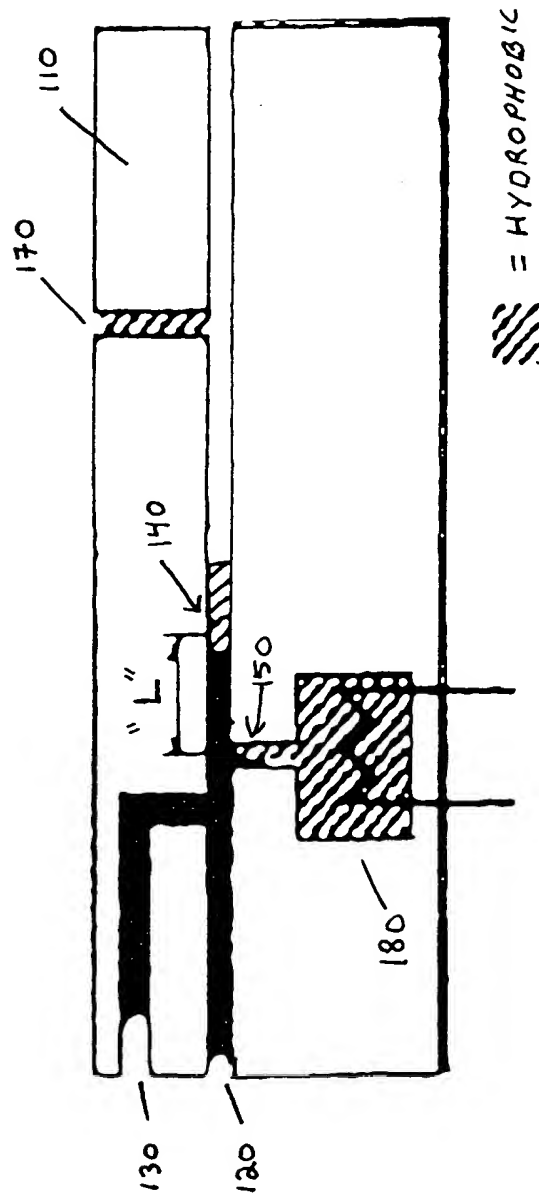


FIGURE 4A

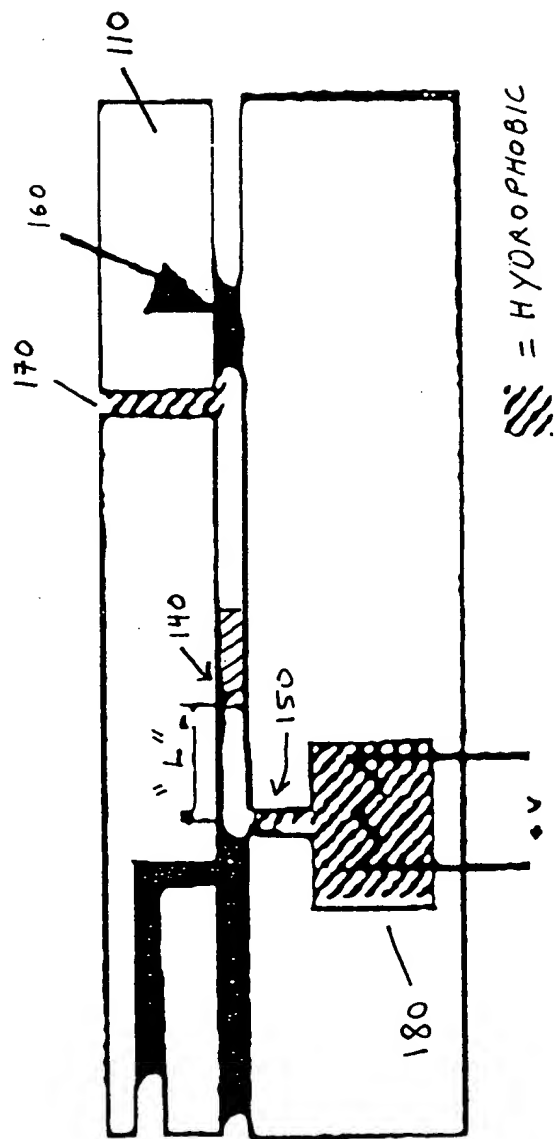


FIGURE 4B

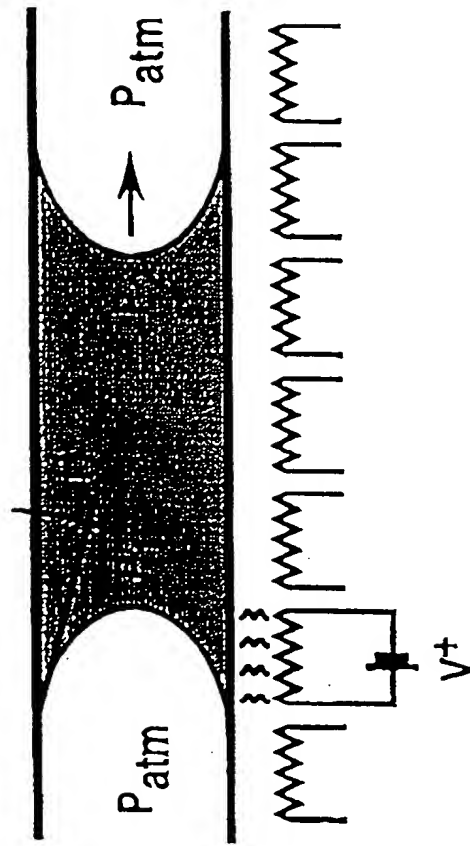


FIGURE 5



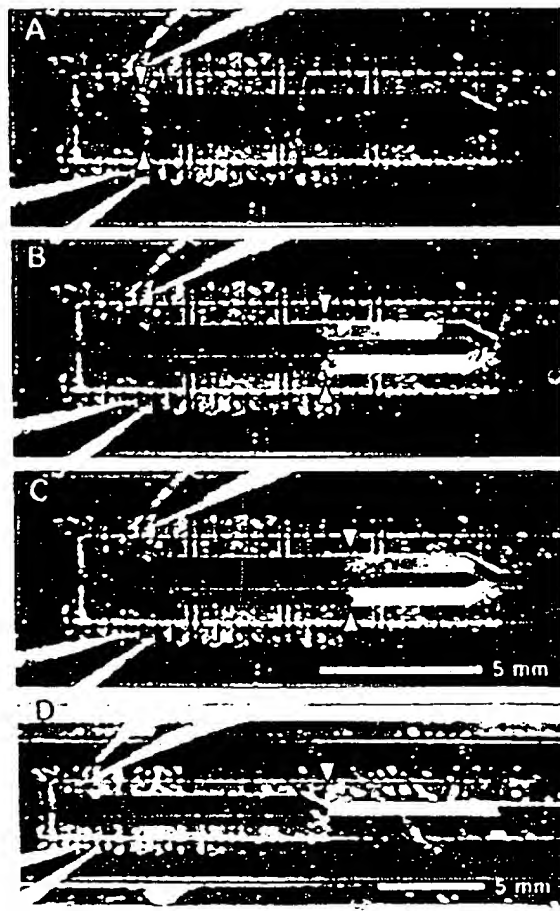


FIGURE 6

00518895-030600

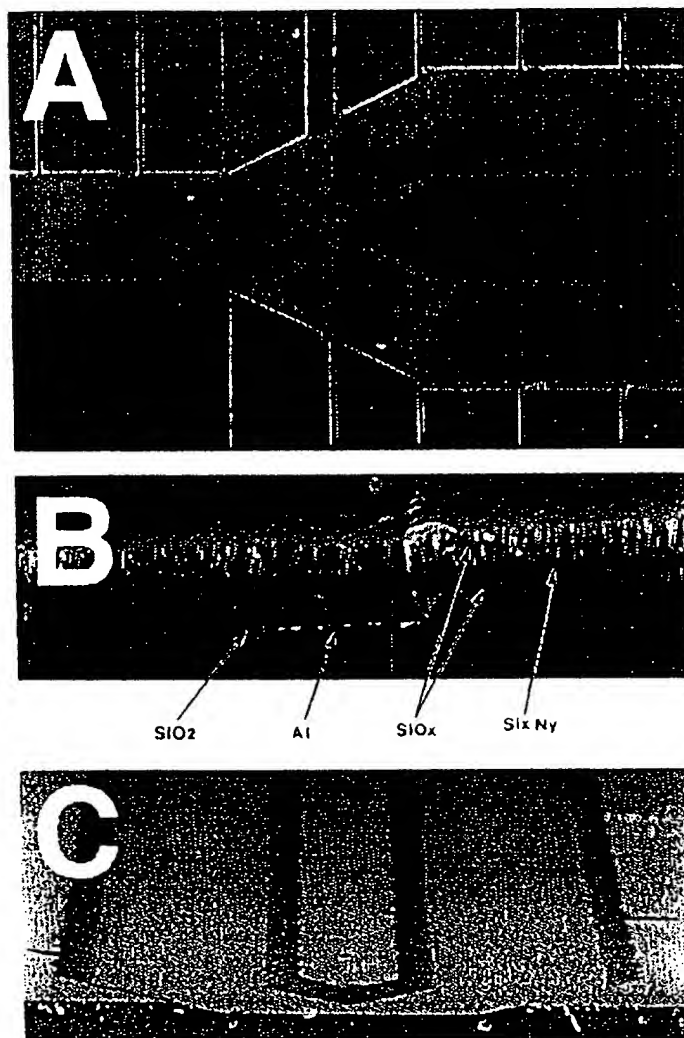


FIGURE 7

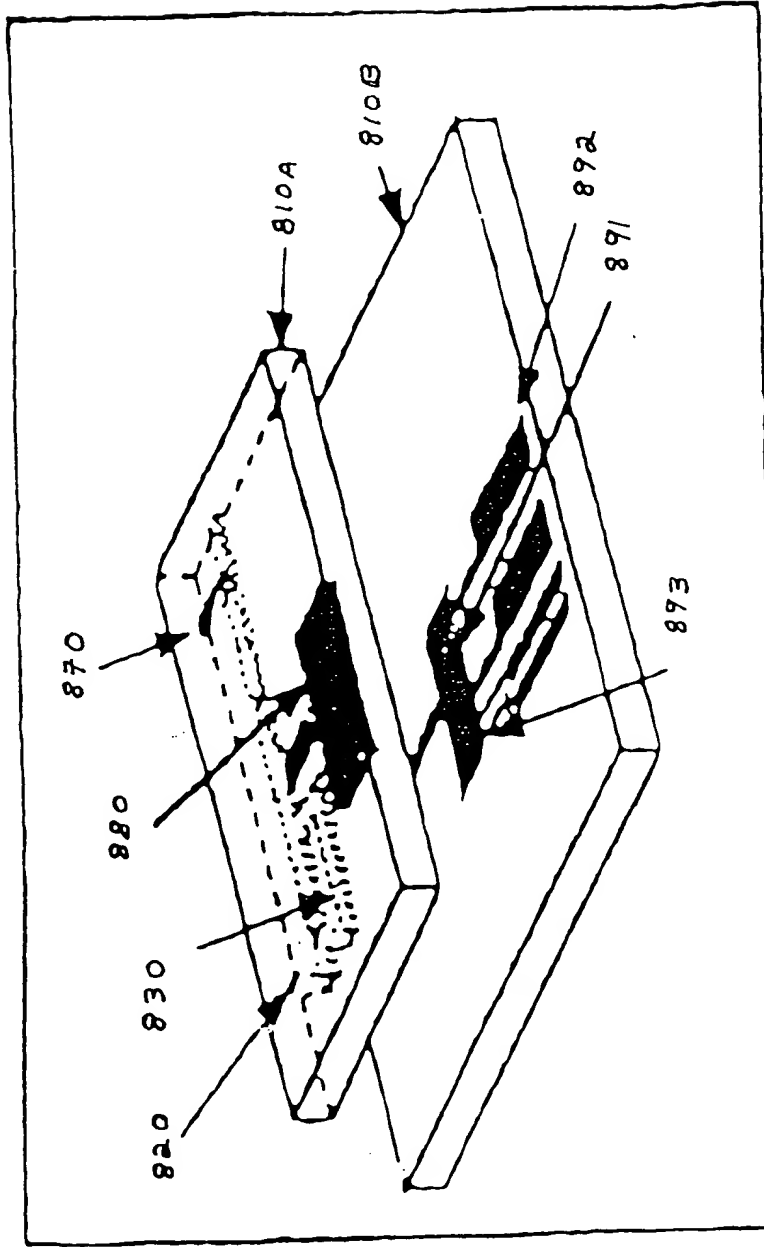


FIGURE 8A

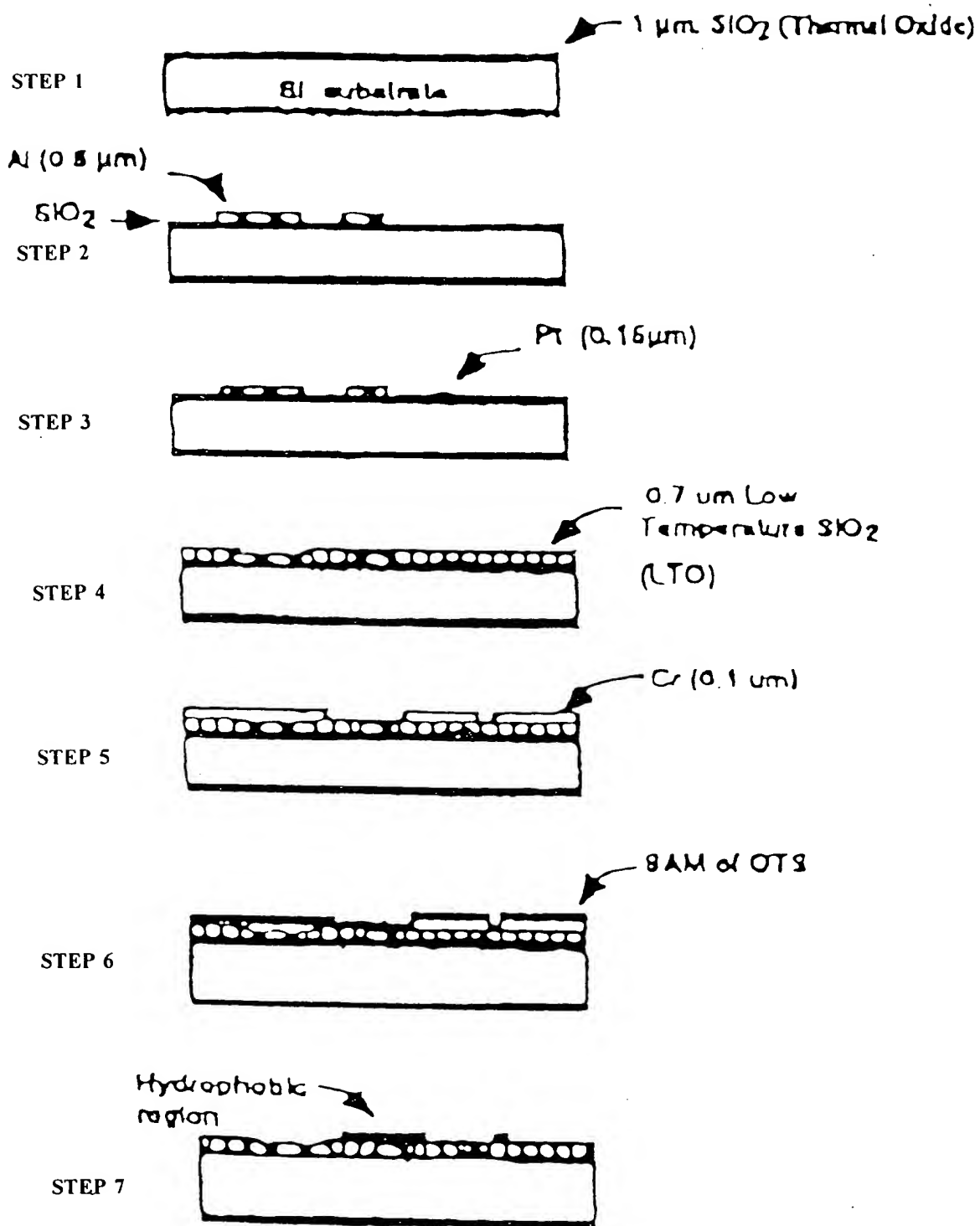


FIGURE 8B

Figure 1 illustrates the eight steps in the fabrication of a microfluidic device. The steps are shown as cross-sectional diagrams of the substrate, with labels indicating the materials and processes used:

- STEP 1:** Glass substrate.
- STEP 2:** Evaporated Cr/Au (600/4000 Å) on the glass.
- STEP 3:** Photoreactant coating.
- STEP 4:** Al coating.
- STEP 5:** Photoreactant coating.
- STEP 6:** SAM of OTS.
- STEP 7:** Hydrophobic region.
- STEP 8:** Final device structure.

**FIGURE 8C**

0054895-030600

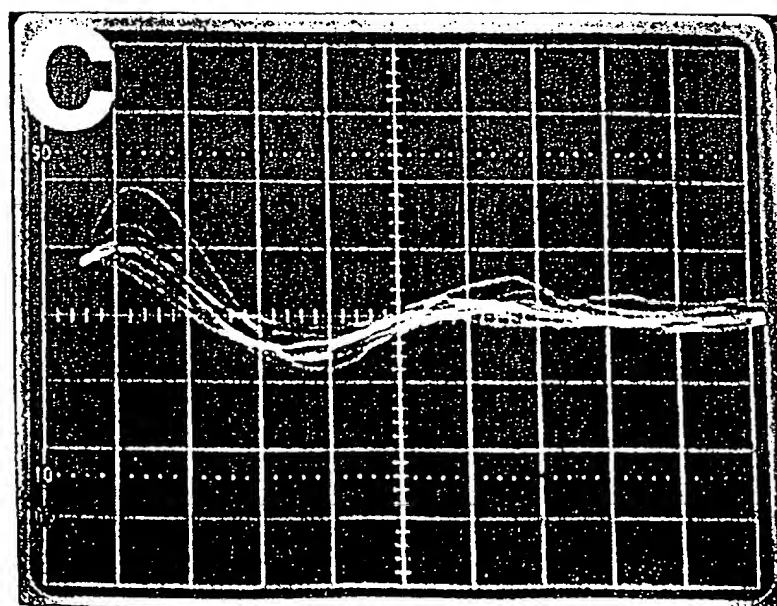
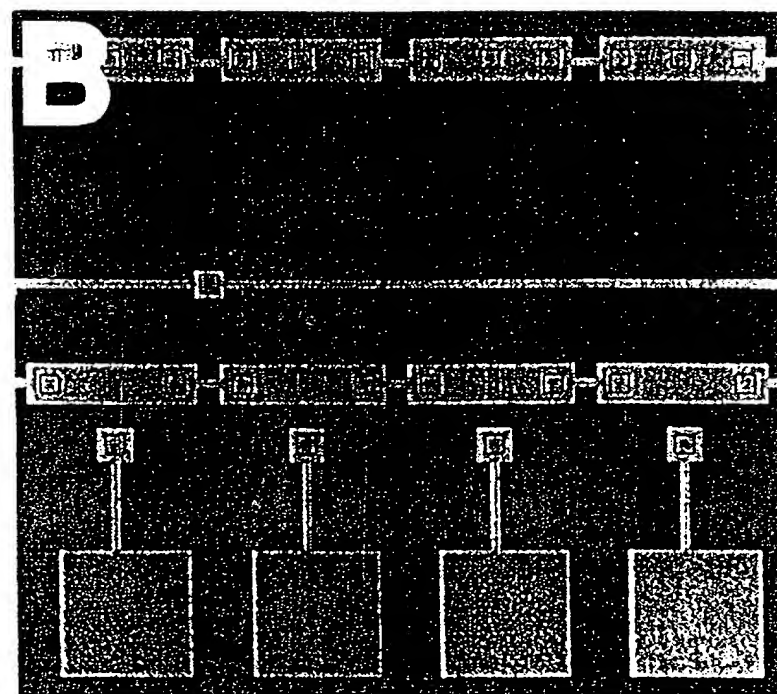
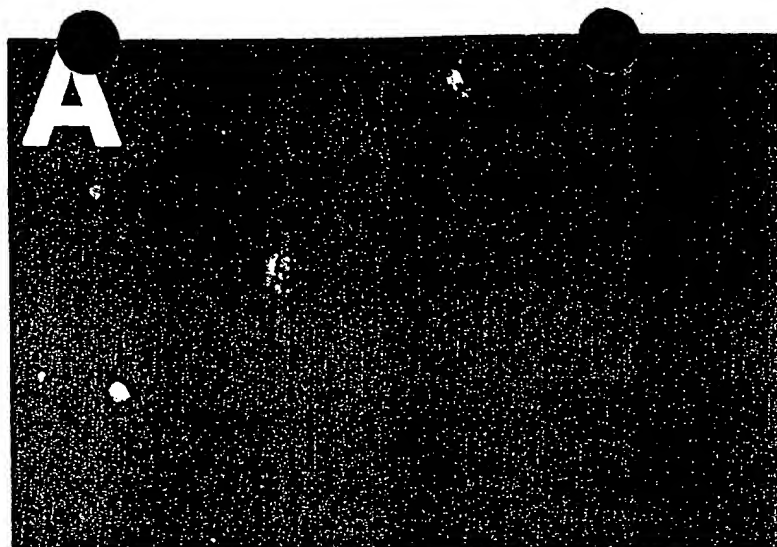


FIGURE 9

# PCR Results with Standard Reagent Amounts

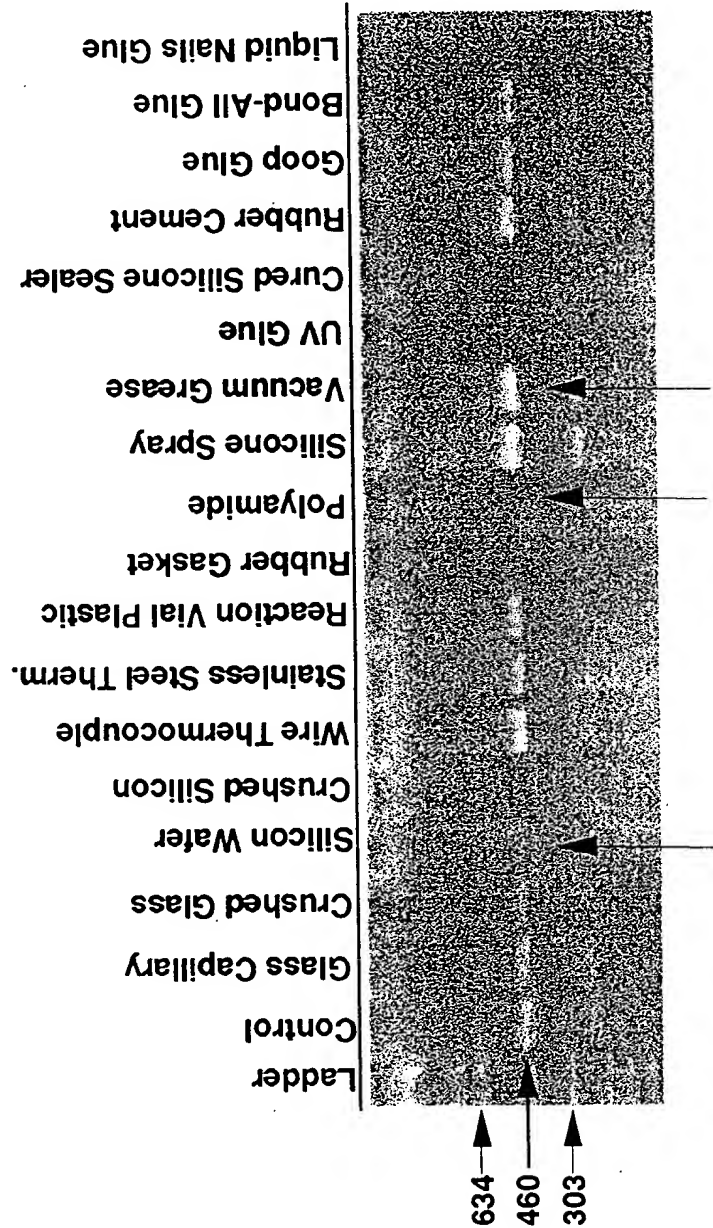


FIGURE 10

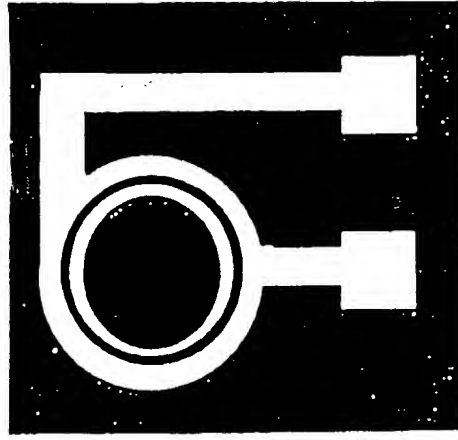
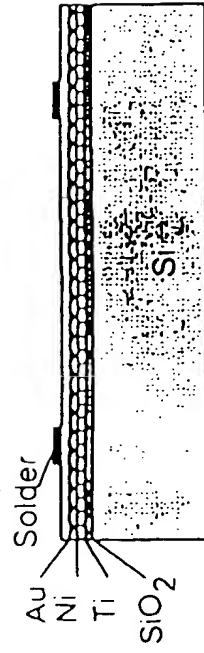
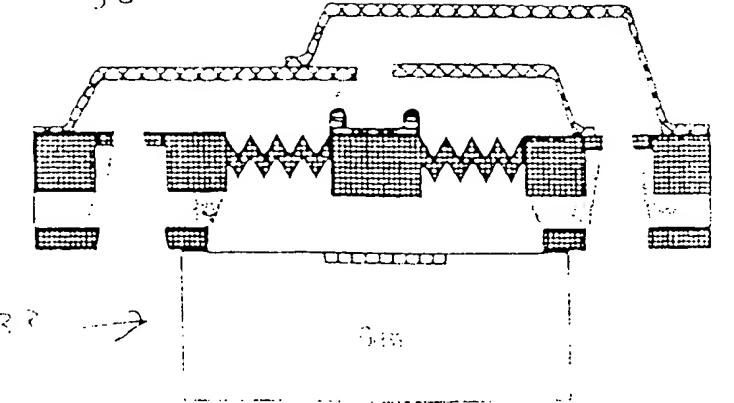
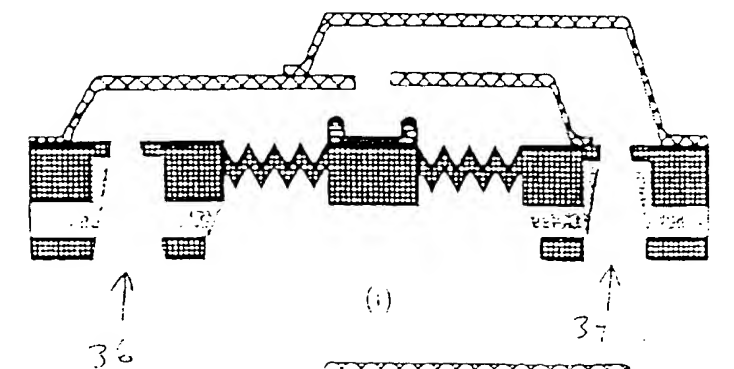
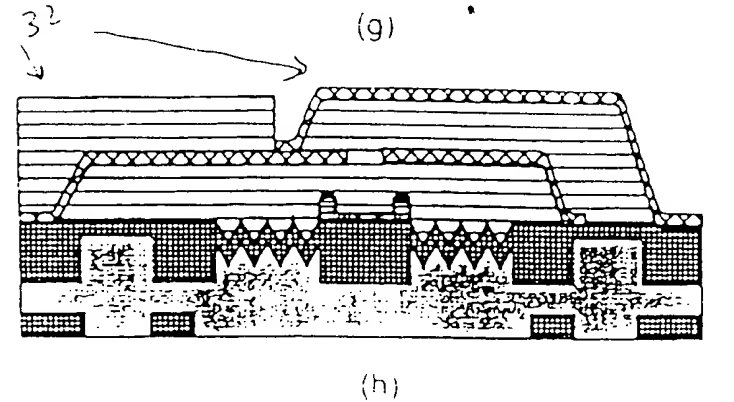
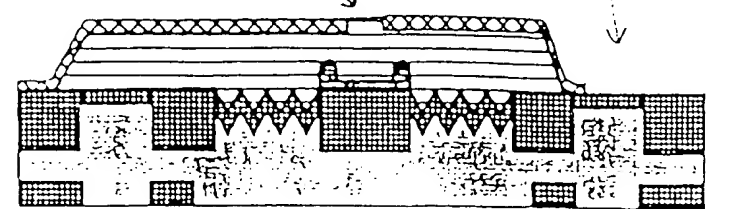
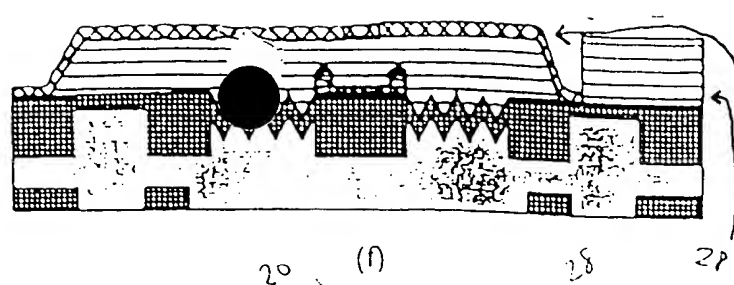
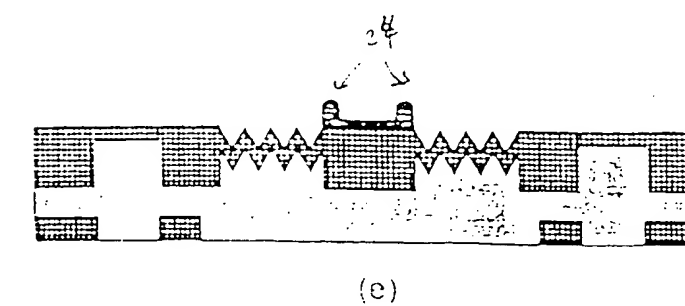
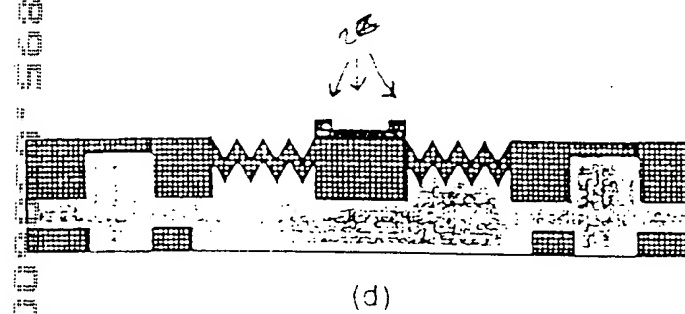
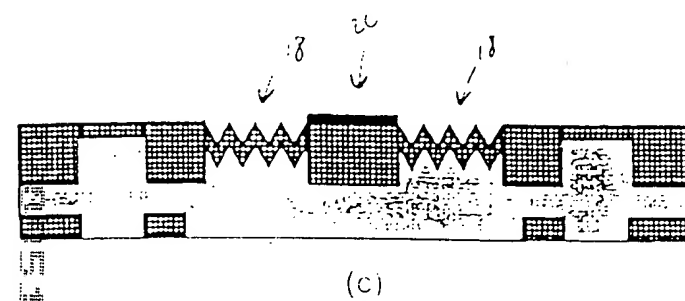
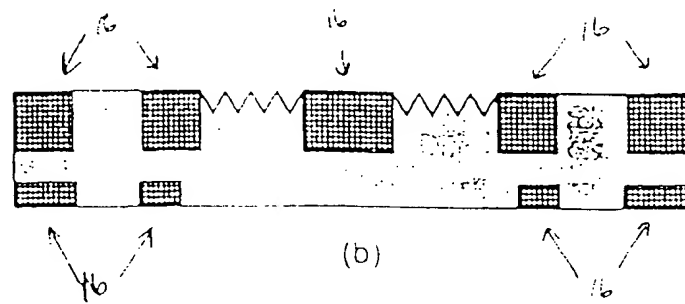
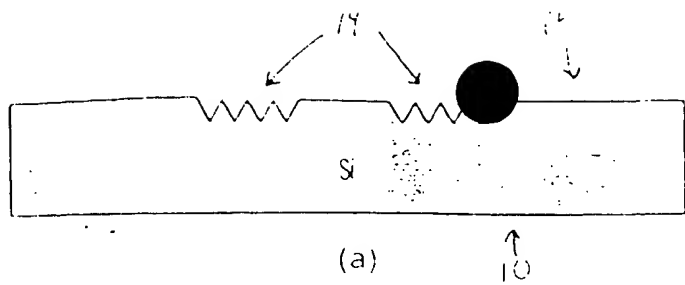


FIGURE 11





- Bumped
- Solder
- $\text{SiO}_2$
- Photoresist
- Ni
- Ti/Pt
- Ti/Ni/Au

FIGURE 12

000000:56881500

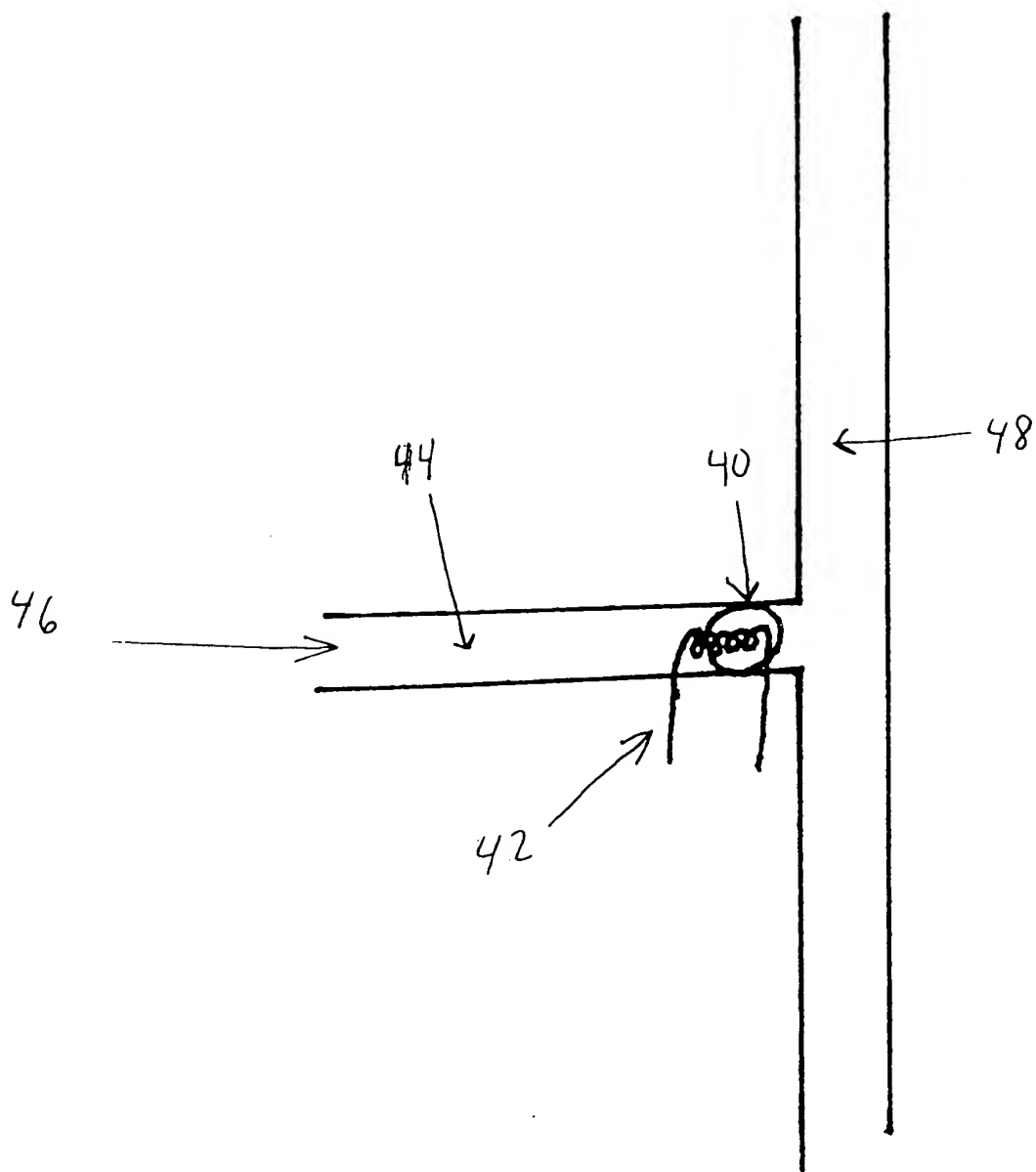


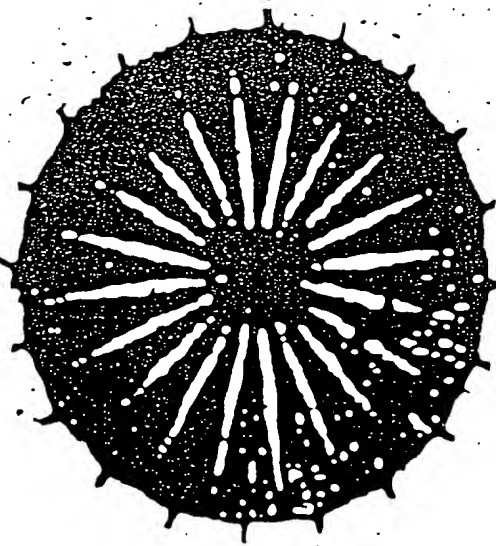
FIGURE 13

005020" 56334560



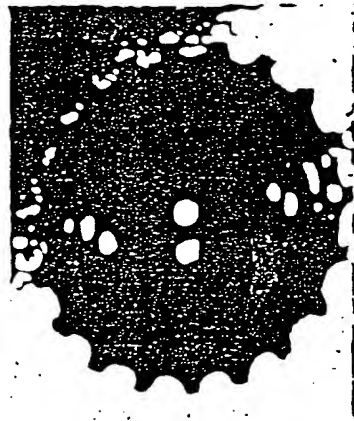
FIGURE 14

Hydrophobic  
(gray region)



Hydrophilic  
(white region)

A



B



C

FIGURE 15

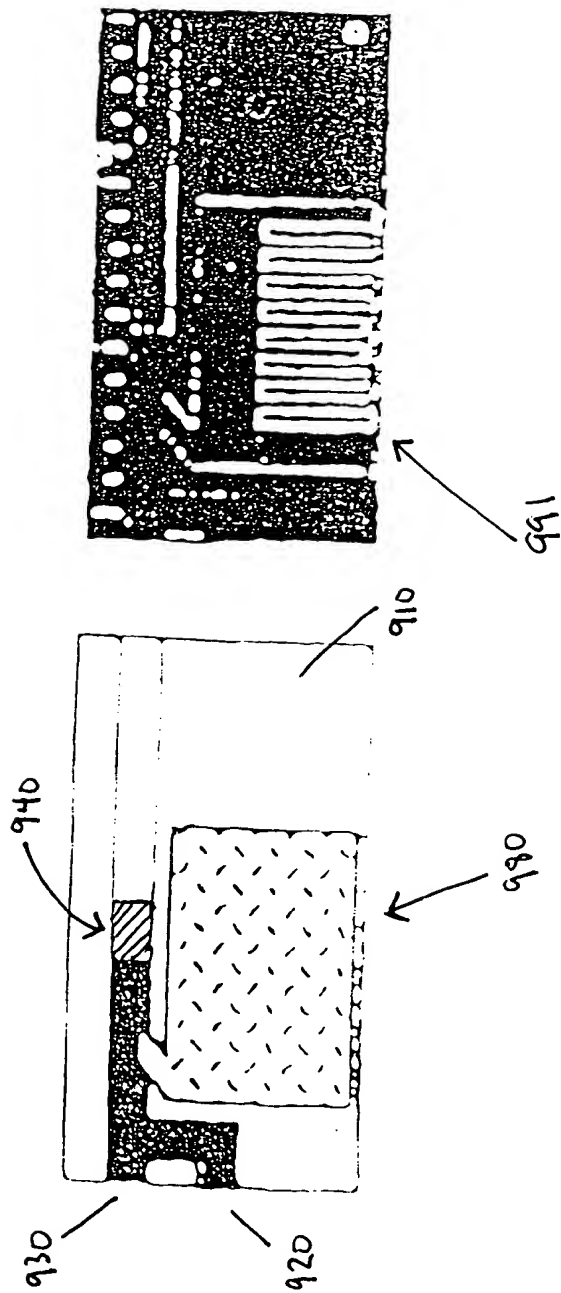


FIGURE 16A

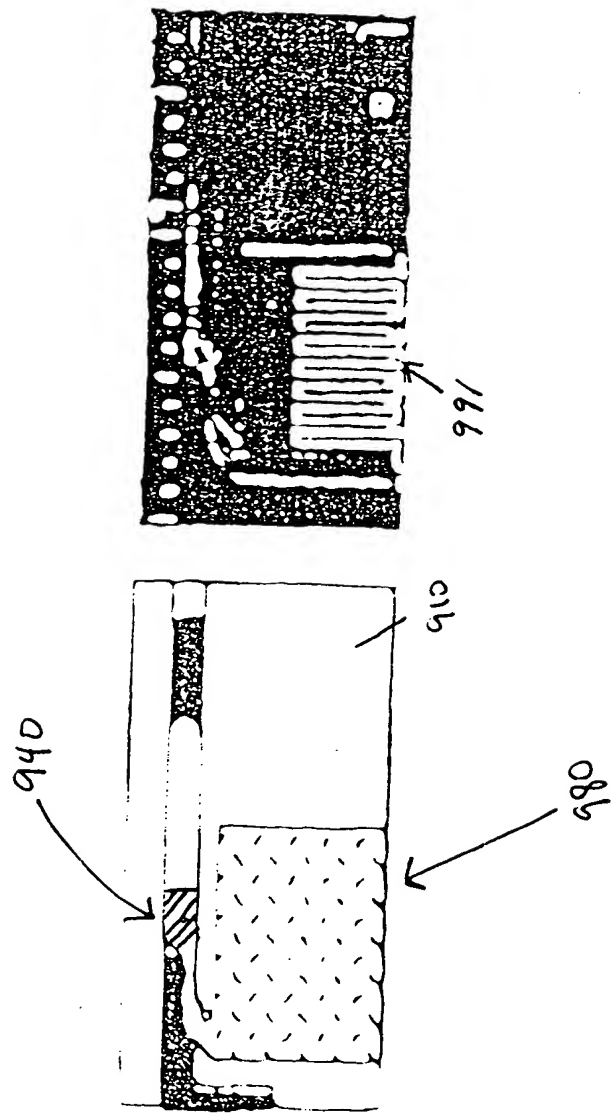


FIGURE 16B

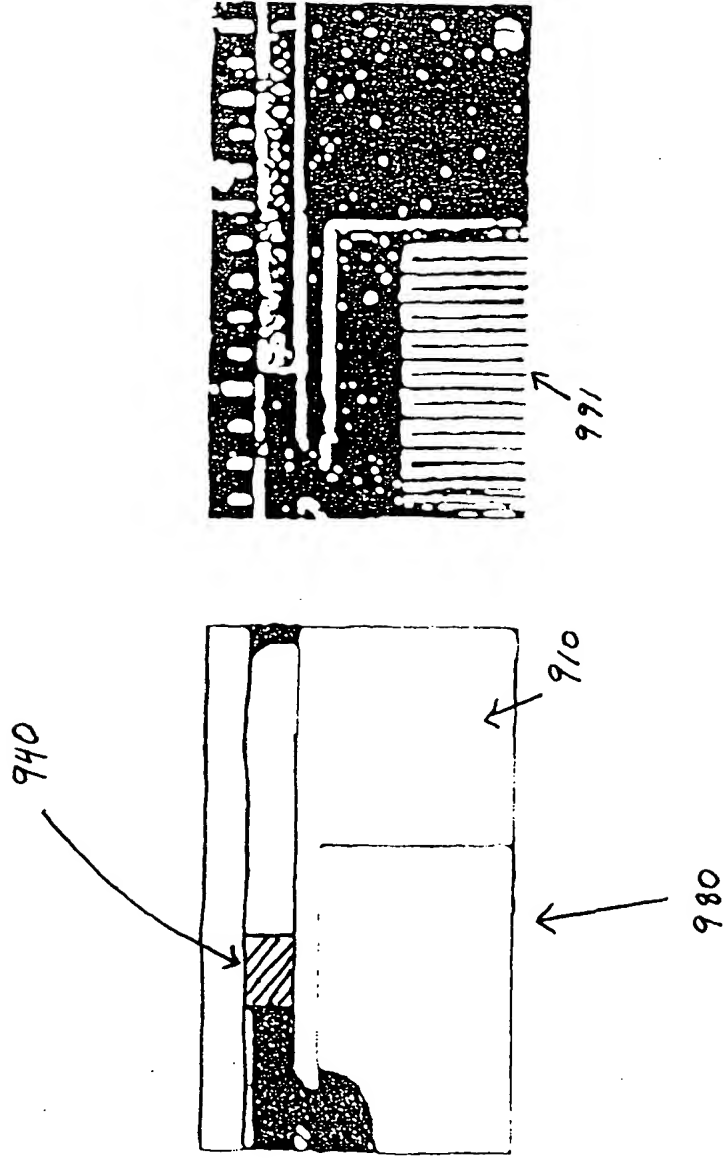


FIGURE 16C

003020-50007500

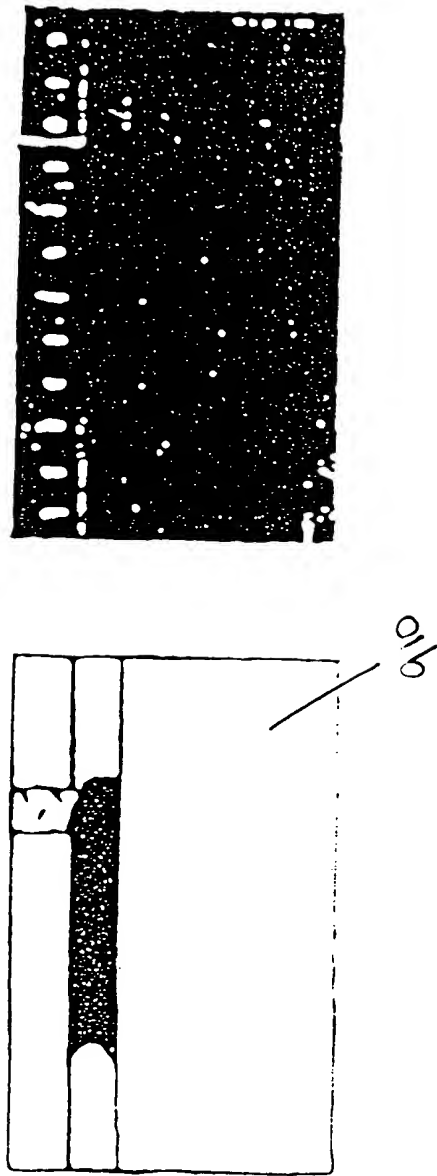


FIGURE 16D



